

We claim:

1. A method for forming a hormone coating composition, the method comprising the steps of:
 - (a) providing a substrate having an external surface;
 - (b) providing a liquid coating material comprising a polymer, a polymer carrier, and from about 1 wppm to about 100,000 wppm of a hormone;
 - (c) applying the liquid coating material to the external surface of the substrate to form a liquid coated substrate; and
 - (d) removing the polymer carrier from the liquid coated substrate under conditions effective to form a solid coated substrate.
2. The method of claim 1, wherein the hormone is a juvenile hormone.
3. The method of claim 2, wherein the juvenile hormone is selected from the group consisting of: Hydroprene, Methoprene, Dimilin and Fenoxycarb.
4. The method of claim 1, wherein the liquid coating material further comprises from about 0.01 weight percent to about 20 weight percent diatomaceous earth.
5. The method of claim 4, further comprising the step of:
 - (e) agitating the liquid coating material under conditions effective to distribute the diatomaceous earth throughout the liquid coating material.
6. The method of claim 1, wherein the liquid coating material further comprises from about 0.1 weight percent to about 20 weight percent of a rheology additive.
7. The method of claim 6, wherein the rheology additive is selected from the group consisting of: cellulose acetate butyrate and cellulose acetate propionate.

8. The method of claim 1, wherein the liquid coating material further comprises from about 0.1 weight percent to about 15 weight percent of a UV protectant.
9. The method of claim 8, wherein the UV protectant is benzophenone.
10. The method of claim 1, wherein the applying step comprises rolling the liquid coating material onto the external surface of the substrate with a rolling device.
11. The method of claim 1, wherein the applying step comprises spraying the liquid coating material onto the external surface of the substrate with a spraying device.
12. The method of claim 1, wherein the removing step comprises heating the liquid coated substrate under conditions effective to at least partially vaporize the polymer carrier.
13. The method of claim 1, wherein the polymer carrier comprises ammonium hydroxide.
14. The method of claim 1, wherein the polymer and the polymer carrier forms an emulsion.
15. The method of claim 1, wherein the liquid coating material further comprises from about 0.1 to about 50 weight percent deionized water.
16. The method of claim 1, wherein the liquid coating material further comprises from about 1 to about 40 weight percent of a polyethylene wax emulsion or a polypropylene wax emulsion.

17. The method of claim 1, wherein the liquid coating material further comprises from about 0.001 to about 5 weight percent of a defoamer.
18. The method of claim 1, wherein the liquid coating material further comprises from about 0.1 to about 20 weight percent of an aqueous crosslinking agent.
19. A coating formulation, comprising:
 - (a) from about 25 to about 99 weight percent of a polymer containing emulsion;
 - (b) from about 0.1 to about 20 weight percent of an aqueous crosslinking agent;
 - (c) from about 0.001 to about 5 weight percent of a defoamer;
 - (d) from about 1 to about 40 weight percent of a polyethylene wax emulsion or of a polypropylene wax emulsion; and
 - (e) from about 1 wppm to about 100,000 wppm of a hormone.
20. The coating formulation of claim 19, further comprising:
 - (f) from about 0.1 to about 50 weight percent deionized water.
21. The coating formulation of claim 19, wherein the polymer containing emulsion comprises styrene acrylic polymers, ammonium hydroxide and polypropylene glycol.
22. The coating formulation of claim 19, wherein the hormone is a juvenile hormone.
23. The coating formulation of claim 22, wherein the juvenile hormone is selected from the group consisting of: Hydroprene, Methoprene, Dimilin and Fenoxycarb.

24. The coating formulation of claim 19, wherein the coating formulation further comprises:

(f) from about 0.01 weight percent to about 20 weight percent diatomaceous earth.

25. The coating formulation of claim 19, further comprising:

(f) from about 0.1 weight percent to about 20 weight percent of a rheology additive.

26. The coating formulation of claim 25, wherein the rheology additive is selected from the group consisting of: cellulose acetate butyrate and cellulose acetate propionate.

27. The coating formulation of claim 19, further comprising:

(f) from about 0.1 weight percent to about 15 weight percent of a UV protectant.

28. The coating formulation of claim 27, wherein the UV protectant is benzophenone.

29. A method for forming a hormone coating composition, the method comprising the steps of:

(a) providing a substrate having an external surface;

(b) providing a liquid coating material comprising a polymer emulsion, and from about 1 wppm to about 100,000 wppm of a hormone, wherein the polymer emulsion comprises a polymer and an emulsifying agent;

(c) applying the liquid coating material to the external surface of the substrate to form a liquid coated substrate; and

(d) removing the emulsifying agent from the liquid coated substrate under conditions effective to form a solid coated substrate.

30. The method of claim 29, wherein the liquid coating material is comprised of from about 25 to about 99 weight percent of the polymer emulsion, from about 0.1 to about 20 weight percent of an aqueous crosslinking agent, from about 0.001 to about 5 weight percent of a defoamer, and from about 1 to about 40 weight percent of a polyethylene wax emulsion or of a polypropylene wax emulsion.

31. The method of claim 29, wherein the hormone is a juvenile hormone.

32. The method of claim 31, wherein the juvenile hormone is selected from the group consisting of: Hydroprene, Methoprene, Dimilin and Fenoxycarb.

33. The method of claim 29, wherein the liquid coating material further comprises from about 0.01 weight percent to about 20 weight percent diatomaceous earth.

34. The method of claim 33, further comprising the step of:

(e) agitating the liquid coating material under conditions effective to distribute the diatomaceous earth throughout the liquid coating material.

35. The method of claim 29, wherein the liquid coating material further comprises from about 0.1 weight percent to about 20 weight percent of a rheology additive.

36. The method of claim 35, wherein the rheology additive is selected from the group consisting of: cellulose acetate butyrate and cellulose acetate propionate.

37. The method of claim 29, wherein the liquid coating material further comprises from about 0.1 weight percent to about 15 weight percent of a UV protectant.

38. The method of claim 37, wherein the UV protectant is benzophenone.
39. The method of claim 29, wherein the applying step comprises rolling the liquid coating material onto the external surface of the substrate with a rolling device.
40. The method of claim 29, wherein the applying step comprises spraying the liquid coating material onto the external surface of the substrate with a spraying device.
41. The method of claim 29, wherein the removing step comprises heating the liquid coated substrate under conditions effective to at least partially vaporize the emulsifying agent.
42. The method of claim 29, wherein the emulsifying agent comprises ammonium hydroxide.
43. The method of claim 29, wherein the liquid coating material further comprises from about 0.1 to about 50 weight percent deionized water.